

## APPENDIX B

1           25. (Amended) A diode laser system, comprising:  
2           a laser head assembly generating an output beam, the laser head assembly including:  
3           M modules which generate M laser beams, wherein each of said M laser beams  
4           has a different [single] unconstrained wavelength; and  
5           M-2 dichroic filters, wherein each of said M-2 dichroic filters transmits a  
6           corresponding one of said M laser beams and reflects all other of said M laser  
7           beams into a predetermined optical path to produce said output beam,  
8           where M is an integer [ $\geq$ ]  $\geq 2$ .

*unclear*  
*new material*

1           26. (Amended) A diode laser system, comprising:  
2           a laser head assembly which generates an output beam, the laser head assembly including:  
3           M modules which generate M laser beams, wherein each of said M laser beams  
4           occupies a different wavelength band;  
5           M-R dichroic bandedge filters, wherein each of said M-R dichroic bandedge  
6           filters transmits at least a respective one of said M laser beams occupying a given  
7           wavelength band and reflects all other of said M laser beams not occupying the  
8           given wavelength band; and  
9           an optical device which combines said M laser beams to thereby produce said  
10          output beam,

*new material*

11          wherein:

12          M and R are positive integers; and  
13          M is an integer  $\geq 2$ .

1           31. (Amended) A laser head assembly which generates an output beam including M laser  
2          beams, comprising:

3           M modules generating M laser beams, wherein each of said M laser beams has a different  
4           single wavelength; and  
5           M-2 dichroic bandedge filters, wherein each of said M-2 dichroic bandedge filters  
6           transmits a corresponding one of said M laser beams and reflects all other of said M laser  
7           beams;  
8           wherein M is an integer [ $\geq$ ]  $\geq 2$ .

1           32. (Amended) The laser head assembly as recited in claim 31, further comprising a fiber  
2           coupling device collecting said M laser beams to produce an output beam[;].

1           33. (Amended) A method for generating a high energy laser beam, comprising:  
2           (a) generating P collimated laser beams, each of the P collimated laser beams having an  
3           unconstrained wavelength within an Mth wavelength band;  
4           (b) repeating step (a) M times so as to produce MxP collimated laser beams [having]  
5           grouped into M different [wavelengths] wavelength bands; and  
6           (c) coupling said MxP collimated laser beams into an optical path to produce a high  
7           energy beam,  
8           wherein M and P are integers  $\geq 2$ .

1           36. (Amended) A diode laser system, comprising:  
2           laser head assembly (LHA) which generates an output beam, the LHA including:  
3           M modules generating M laser beams, wherein each of said M laser beams has a different  
4           single wavelength;  
5           M-1 first dichroic bandedge filters defining an optical waveguide for directing all of said  
6           M laser beams into the optical path, wherein each of said M-1 [first] bandedge dichroic filters  
7           transmits a corresponding one of said M laser beams and reflects all other said M laser beams;  
8           and

9           a fiber coupling device disposed adjacent to the optical path for collecting said M laser  
10          beams to thereby produce an output beam;  
11          wherein M is an integer  $\geq 2$ .

1           40. (Amended) A diode laser system, comprising:

2           first means for generating M first laser beams, wherein each of said M first laser beams  
3          has a different single wavelength;

4           M-1 first filter means defining a first optical waveguide for directing all of said M first  
5          laser beams into [an] a first optical path, wherein each of said M-1 filter means transmits a  
6          corresponding one of said M first laser beams and reflects all other said M first laser beams;

7           second means for generating M second laser beams, wherein each of said M second laser  
8          beams has a different single wavelength;

9           M-1 second filter means defining a second optical waveguide for directing all of said M  
10          second laser beams into a second optical path, wherein each of said M-1 second filter means  
11          transmits a corresponding one of said M second laser beams and reflects all other said M second  
12          laser beams;

13           polarization combining means disposed at the intersection of said first and second optical  
14          paths for coupling said M first and said M second laser beams into said second optical path to  
15          thereby produce 2M polarization coupled laser beams; and

16           fiber coupling means disposed adjacent to said second optical path for collecting said 2M  
17          polarization coupled laser beams to thereby produce an output laser beam,  
18          wherein M is an integer  $\geq 2$ .

path

cutout  
output

1           41. (Amended) A method for generating a high energy laser beam, comprising:

2           (a) generating P collimated laser beams, each of the P collimated laser beams having an  
3          unconstrained wavelength within an Mth wavelength band;

4           (b) repeating step (a) M times so as to produce MxP collimated laser beams [having]

5       grouped into M different [wavelengths] wavelength bands;

6           (c) coupling said  $M \times P$  collimated laser beams into an optical oath; and

7           (d) coupling said  $M \times P$  collimated laser beams into an  $i^{\text{th}}$  optical fiber to thereby produce  
8       a corresponding  $i^{\text{th}}$  output laser beam, where  $i = 1$  to  $N$ ;

9       where  $M$ ,  $N$  and  $P$  are positive integers and both  $M$  and  $P \geq 2$ .